

Importance of the metabolic syndrome in patients with acute ST-elevation myocardial infarction

Purpose: Authors investigated influence of the metabolic syndrome (MetS) on clinical severity and prognosis in patients with acute ST-elevation myocardial infarction (STEMI) treated with primary percutaneous coronary intervention (PCI).

Methods: 250 patients with acute STEMI treated with primary PCI were divided in two groups (with or without MetS) and prospectively analysed, between September 2011 and September 2012. MetS was diagnosed by revised National Cholesterol Education Program Adult Treatment Panel III (NCEP-ATP III) criteria. The groups were compared and analysed in accordance with their baseline (medical history, demographic and anthropometric parameters), clinical data (parameters of severity and prognosis of acute STEMI), severity (evaluated by using clinical, laboratory, echocardiography, coronary angiography, and in-hospital complications parameters), and prognosis (using the major adverse cardiovascular events (MACE) parameters and sick leave duration (SLD), during 12 months follow-up period). Statistical significance was defined as $p < 0.05$.

Results: Among total of 250 patients, there were 136 (54.4%) patients with MetS and 114 (45.6%) without it. MetS was more frequent in females ($p < 0.05$). Patients with MetS had longer hospitalization ($p < 0.05$), higher rate of total in-hospital complications ($p < 0.05$), higher number of significantly stenosed coronary arteries ($p < 0.05$), higher diameter of stents ($p < 0.05$), higher rate of proximal and middle coronary segments stenosis ($p < 0.05$), and longer SLD ($p < 0.05$).

Conclusion: MetS in acute STEMI is an important predictor of severity, but not prognosis, and those patients have more serious coronary artery disease. Also, it is useful predictor of SLD.